

# VA/VG Series

## On/Off and Shut-off Valve

DVAVG1862X012

### Specifications

For other materials or modifications, please consult TESCOM.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

<b>Maximum Operating Pressure</b>	3500, 6000, 10,000 psig / 241, 414, 690 bar
<b>Design Proof Pressure</b>	150% maximum rated
<b>Leak Rate</b>	Bubble-tight
<b>Ambient Operating Temperature</b>	See Part Number Selector
<b>Flow Capacity</b>	<b>VA Series Valve:</b> $C_v = 0.75$ <b>VG Series Valve:</b> $C_v = 2.0$
<b>Low Actuation Pressure Range</b>	60 psig / 4.1 bar
<b>Maximum Actuation Pressure</b>	<b>VA Series Valve:</b> 125 psig / 8.6 bar <b>VG Series Valve:</b> 150 psig / 10.3 bar
<b>Actuation Times with 80 psig / 5.5 bar Actuation Pressure</b>	<b>VA Series Valve:</b> 50 milliseconds <b>VG Series Valve:</b> 75 milliseconds

#### MEDIA CONTACT MATERIALS

<b>Body</b>	Brass, 316 Stainless Steel
<b>Seats</b>	CTFE, Tefzel® ETFE, Vespel®
<b>Valve Stem</b>	17-4 Stainless Steel
<b>O-Rings</b>	Buna-N, Kalrez®, Viton®, Ethylene Propylene (E.P.), Urethane
<b>Back-up Rings</b>	Teflon®, CTFE
<b>Remaining Parts</b>	316 Stainless Steel, Brass

#### OTHER

<b>Cleaning</b>	CGA 4.1 and ASTM G93
<b>Weight (approximate)</b>	<b>VA Series Valve:</b> 3 lbs / 1.4 kg <b>VG Series Valve:</b> 5 lbs / 2.3 kg

Kalrez®, Viton®, Tefzel®, Teflon®, and Vespel® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM VA and VG Series are air operated valves offering normally open/normally closed capabilities, operating pressures of 6000, 10,000, and 15,000 psig / 414, 690, and 1034 bar, very high cycle life and optional integrated solenoid valve. Suitable for liquid and gas applications.

### Applications

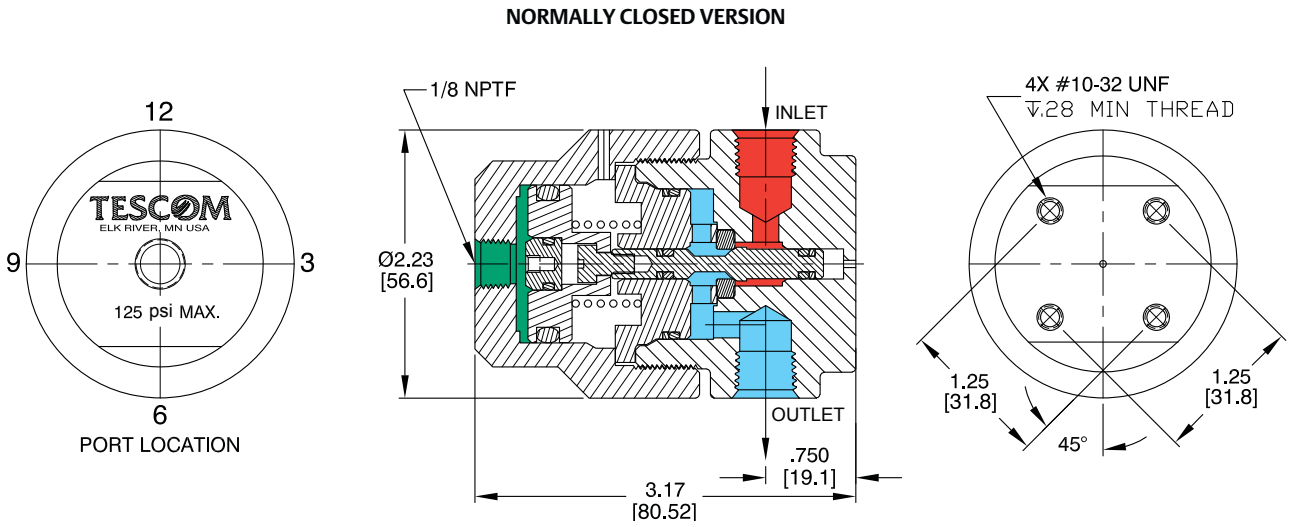
- High pressure cycling testing
- Pneumatic and hydraulic control panels
- R&D labs

### Features and Benefits

- Balanced poppet design means high reliability and exceptional cycle life
- High flow capacity:  $C_v = 0.75$  or 2.0
- Normally open or normally closed
- Brass or 316 Stainless Steel machined bar stock
- Low actuation: 60 psig / 4.1 bar - minimum
- High operating pressure: 6000 psig / 414 bar maximum (Brass), 10,000 psig / 690 bar maximum (Stainless Steel)
- 15,000 psig / 1034 bar version is available
- Oxygen model is available that has passed adiabatic compression test per ISO 10524
- Optional pneumatic assist solenoid valve actuation (12V, 24V or 115V)

VA/VG Series Valve Drawings

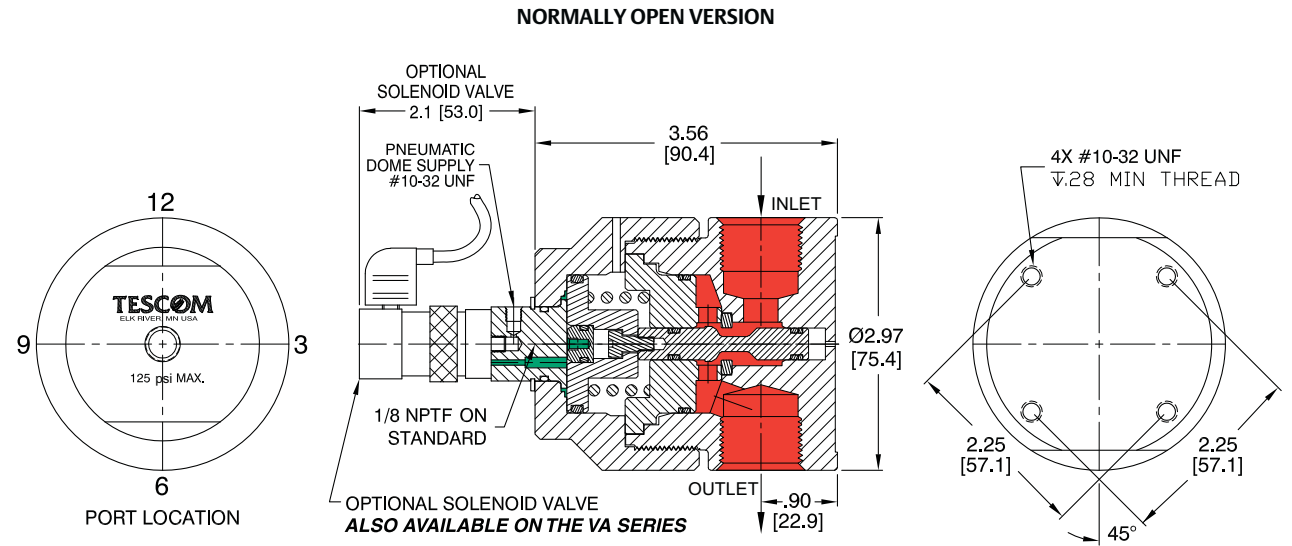
VA SERIES



TOOLS FOR ASSEMBLY FOR VA VALVE

PART NO.	DESCRIPTION	QUANTITY	PART NO.	DESCRIPTION	QUANTITY
64082-1	Tool, Spacer	1	64096	Collet Spanner Wrench	1
64083-1	Tool, Base	1	64097	Collet, 1/4" / 6.35 mm	1
64095	Hex Collet Chuck	1	64084	Complete Kit	

VG SERIES



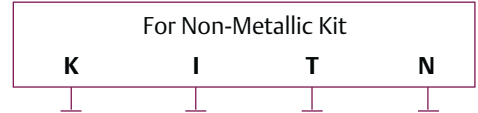
All dimensions are reference & nominal  
Metric [millimeter] equivalents are in brackets

## VA/VG Series Valve Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

### VA SERIES



VA	C	1	AB				9	A	9	B	9
SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT				OPTIONS	PORT LOCATION 3 SIZE AND TYPE	PORT LOCATION 6 SIZE AND TYPE	PORT LOCATION 9 SIZE AND TYPE	PORT LOCATION 12 SIZE AND TYPE
			SEAT MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE					
VA	C – Normally Closed	1 – Brass	AB – Tefzel® ETFE	Buna-N	Brass 3500 psig	-40°F to 165°F -40°C to 74°C	9 – None  C – CCL  V – Solenoid Valve (24 volt)  W – Solenoid Valve (12 volt)	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet	A – 1/4" NPTF Inlet
	P – Normally Open	6 – 316 Stainless Steel	AK – Tefzel® ETFE AV – Tefzel® ETFE AE – Tefzel® ETFE AU – Tefzel® ETFE	Kalrez® Viton® E.P. Urethane	241 bar Stainless Steel 3500 psig 241 bar	20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 250°F -40°C to 121°C -40°F to 165°F -40°C to 74°C		C – 3/8" NPTF Inlet E – 1/4" SAE Inlet N – 1/8" NPTF Inlet (changes Cv to 0.5)	B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	B – 1/4" NPTF Outlet C – 3/8" NPTF Inlet D – 3/8" NPTF Outlet E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None
			CB – CTFE CK – CTFE CV – CTFE CE – CTFE CU – CTFE	Buna-N Kalrez® Viton® E.P. Urethane	Brass 3500 psig 241 bar Stainless Steel 3500 psig 241 bar	-40°F to 165°F -40°C to 74°C 20°F to 165°F -7°C to 74°C -15°F to 165°F -26°C to 74°C -40°F to 165°F -40°C to 74°C -40°F to 165°F -40°C to 74°C		F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	E – 1/4" SAE Inlet F – 1/4" SAE Outlet P – 1/8" NPTF Outlet (changes Cv to .5) 9 – None	
			PB – PEEK PK – PEEK PV – PEEK PE – PEEK PU – PEEK	Buna-N Kalrez® Viton® E.P. Urethane	Brass 6000 psig 414 bar Stainless Steel 10,000 psig 690 bar	-40°F to 165°F -40°C to 74°C 20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 165°F -40°C to 74°C					
			VB – Vespel® VK – Vespel® VV – Vespel® VE – Vespel® VU – Vespel®	Buna-N Kalrez® Viton® E.P. Urethane	Brass 6000 psig 414 bar Stainless Steel 10,000 psig 690 bar	-40°F to 165°F -40°C to 74°C 20°F to 250°F -7°C to 121°C -15°F to 250°F -26°C to 121°C -40°F to 165°F -40°C to 74°C					

\* For additional porting types, consult factory.

## VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

### VG SERIES

For Non-Metallic Kit			
<b>K</b>	<b>I</b>	<b>T</b>	<b>N</b>

SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT				OPTIONS	PORT LOCATION 3 SIZE AND TYPE	PORT LOCATION 6 SIZE AND TYPE	PORT LOCATION 9 SIZE AND TYPE	PORT LOCATION 12 SIZE AND TYPE
			SEAT MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE					
<b>VG</b>	<b>C</b> – Normally Closed <b>P</b> – Normally Open	<b>1</b> – Brass <b>6</b> – 316 Stainless Steel	<b>CB</b> – CTFE	Buna-N	Brass 3500 psig	-40°F to 165°F -40°C to 74°C	<b>9</b> – None <b>C</b> – CCL <b>V</b> – Solenoid Valve (24 volt) <b>W</b> – Solenoid Valve (12 volt)	<b>C</b> – 3/8" NPTF Inlet <b>G</b> – 1/2" NPTF Inlet <b>J</b> – 3/4" NPTF Inlet <b>L</b> – 3/8" SAE Inlet <b>P</b> – 1/2" SAE Inlet	<b>C</b> – 3/8" NPTF Inlet <b>D</b> – 3/8" NPTF Outlet <b>G</b> – 1/2" NPTF Inlet <b>H</b> – 1/2" NPTF Outlet <b>J</b> – 3/4" NPTF Inlet <b>K</b> – 3/4" NPTF Outlet <b>L</b> – 3/8" SAE Inlet <b>M</b> – 3/8" SAE Outlet <b>P</b> – 1/2" SAE Inlet <b>R</b> – 1/2" SAE Outlet <b>9</b> – None	<b>C</b> – 3/8" NPTF Inlet <b>D</b> – 3/8" NPTF Outlet <b>G</b> – 1/2" NPTF Inlet <b>H</b> – 1/2" NPTF Outlet <b>J</b> – 3/4" NPTF Inlet <b>K</b> – 3/4" NPTF Outlet <b>L</b> – 3/8" SAE Inlet <b>M</b> – 3/8" SAE Outlet <b>P</b> – 1/2" SAE Inlet <b>R</b> – 1/2" SAE Outlet <b>9</b> – None	<b>C</b> – 3/8" NPTF Inlet <b>D</b> – 3/8" NPTF Outlet <b>G</b> – 1/2" NPTF Inlet <b>H</b> – 1/2" NPTF Outlet <b>J</b> – 3/4" NPTF Inlet <b>K</b> – 3/4" NPTF Outlet <b>L</b> – 3/8" SAE Inlet <b>M</b> – 3/8" SAE Outlet <b>P</b> – 1/2" SAE Inlet <b>R</b> – 1/2" SAE Outlet <b>9</b> – None
			<b>CE</b> – CTFE	E.P.	Stainless Steel 3500 psig	-15°F to 165°F -26°C to 74°C -40°F to 165°F -40°C to 74°C					
			<b>CU</b> – CTFE	Urethane	Stainless Steel 241 bar	-40°F to 165°F -40°C to 74°C					
			<b>PB</b> – PEEK	Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C					
			<b>PK</b> – PEEK	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C					
			<b>PV</b> – PEEK	Viton®		-15°F to 250°F -26°C to 121°C					
			<b>PE</b> – PEEK	E.P.	Stainless Steel 10,000 psig	-40°F to 250°F -40°C to 121°C					
			<b>PU</b> – PEEK	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					
			<b>VB</b> – Vespel®	Buna-N	Brass 6000 psig	-40°F to 165°F -40°C to 74°C					
			<b>VK</b> – Vespel®	Kalrez®	414 bar	20°F to 250°F -7°C to 121°C					
			<b>VV</b> – Vespel®	Viton®		-15°F to 250°F -26°C to 121°C					
			<b>VE</b> – Vespel®	E.P.	Stainless Steel 10,000 psig	-40°F to 250°F -40°C to 121°C					
			<b>VU</b> – Vespel®	Urethane	690 bar	-40°F to 165°F -40°C to 74°C					

## VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

### VALVE MODULES FOR VA SERIES VALVE

SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT MATERIAL	BACK-UP RING MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE
<b>63583 -</b>	<b>C</b>	<b>6</b>					<b>CV</b>
<b>63583</b>	C – Normally Closed P – Normally Open	1 – Brass	AB – Tefzel® ETFE AK – Tefzel® ETFE AV – Tefzel® ETFE AE – Tefzel® ETFE AU – Tefzel® ETFE	Teflon® Teflon® Teflon® Teflon® Teflon®	Buna-N Kalrez® Viton® E.P. Urethane	Brass 3500 psig / 241 bar Stainless Steel 3500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C 20°F to 250°F / -7°C to 121°C -15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C -40°F to 165°F / -40°C to 74°C
		6 – 316 Stainless Steel	CB – CTFE CK – CTFE CV – CTFE CE – CTFE CU – CTFE	Teflon® Teflon® Teflon® Teflon® Teflon®	Buna-N Kalrez® Viton® E.P. Urethane	Brass 3500 psig / 241 bar Stainless Steel 500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C 20°F to 165°F / -7°C to 74°C -15°F to 165°F / -26°C to 74°C -40°F to 165°F / -40°C to 74°C -40°F to 165°F / -40°C to 74°C
			PB – PEEK PK – PEEK PV – PEEK PE – PEEK PU – PEEK	CTFE CTFE CTFE CTFE CTFE	Buna-N Kalrez® Viton® E.P. Urethane	Brass 6000 psig / 414 bar Stainless Steel 10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C 20°F to 250°F / -7°C to 121°C -15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C -40°F to 165°F / -40°C to 74°C
			VB – Vespel® VK – Vespel® VV – Vespel® VE – Vespel® VU – Vespel® VG – Vespel®	CTFE CTFE CTFE CTFE CTFE CTFE	Buna-N Kalrez® Viton® E.P. Urethane Buna-N90 Duro	Brass 6000 psig / 414 bar Stainless Steel 10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C 20°F to 250°F / -7°C to 121°C -15°F to 250°F / -26°C to 121°C -40°F to 250°F / -40°C to 121°C -40°F to 165°F / -40°C to 74°C -40°F to 250°F / -40°C to 121°C

## VA/VG Series Valve Part Number Selector

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Example for selecting a part number:

### VALVE MODULES FOR VG SERIES VALVE

67270 - C 6 VV

SERIES	TYPE	BODY AND TRIM MATERIAL	SEAT MATERIAL	BACK-UP RING MATERIAL	O-RING	MAXIMUM OPERATING PRESSURE	OPERATING TEMPERATURE	
67270	C – Normally Closed  P – Normally Open	1 – Brass  6 – 316 Stainless Steel	CB – CTFE	Teflon®	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C	
			CK – CTFE	Teflon®	Kalrez®	3500 psig / 241 bar	20°F to 165°F / -7°C to 74°C	
			CV – CTFE	Teflon®	Viton®	Stainless Steel	-15°F to 165°F / -26°C to 74°C	
			CE – CTFE	Teflon®	E.P.	3500 psig / 241 bar	-40°F to 165°F / -40°C to 74°C	
			CU – CTFE	Teflon®	Urethane		-40°F to 165°F / -40°C to 74°C	
				PB – PEEK	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C
				PK – PEEK	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C
				PV – PEEK	CTFE	Viton®		-15°F to 250°F / -26°C to 121°C
				PE – PEEK	CTFE	E.P.	Stainless Steel	-40°F to 250°F / -40°C to 121°C
				PU – PEEK	CTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C
			VB – Vespel®	CTFE	Buna-N	Brass	-40°F to 165°F / -40°C to 74°C	
			VK – Vespel®	CTFE	Kalrez®	6000 psig / 414 bar	20°F to 250°F / -7°C to 121°C	
			VV – Vespel®	CTFE	Viton®		-15°F to 250°F / -26°C to 121°C	
			VE – Vespel®	CTFE	E.P.	Stainless Steel	-40°F to 250°F / -40°C to 121°C	
			VU – Vespel®	CTFE	Urethane	10,000 psig / 690 bar	-40°F to 165°F / -40°C to 74°C	